

RECEIVED

JUL 20 1990

TECH CENTER 1600/2

PATENT APPLICATION

Page 1 of 1

FORM PTO-1449	ATTY. DOCKET NO.	ADVEC9	SERIAL NO.	09/286,874
	APPLICANT	Graham, et al.		
	FILING DATE	04/06/99	GROUP	Unknown 1632

REFERENCE DESIGNATION

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLAS	TRANSLATION	
PB	WO 95/27071		University of Texas (PCT)			YES	NO

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

PB	Russ, Andreas P. et al., 1996. Self-Deleting Retrovirus Vectors for Gene Therapy. J. of Virology, pp. 4927-4932.		
EXAMINER	Pete Bruno	DATE CONSIDERED	10/20/00

FORM PTO-1449	ATTY. DOCKET NO.	ADVEC9	SERIAL NO.	09/286,874
	APPLICANT	Graham, et al.		
	FILING DATE	04/06/99	GROUP	Unknown 1632

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
PB	4,797,368	01/10/89	Carter, et al.		
PB	4,920,209	04/24/90	Davis, et al.		
PB	4,920,211	04/24/90	Tibbetts, et al.		
PB	4,510,245	04/09/85	Cousens, et al.		
PB	5,670,488	09/23/97	Gregory, et al.		
PB	5,882,877	03/16/99	Gregory, et al.		

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLAS	TRANSLATION
PB	WO 93/19191	09/30/93	PCT			YES <input checked="" type="radio"/> NO
PB	WO 93/06223	04/01/93	PCT			<input checked="" type="radio"/>
PB	WO 94/08026	04/14/94	PCT			<input checked="" type="radio"/>
PB	WO 97/32481	09/12/97	PCT			<input checked="" type="radio"/>
PB	WO 94/12649	06/09/94	PCT			<input checked="" type="radio"/>
PB	WO 93/19092	09/30/93	Defective Recombinant Adenoviruses Expressing Characteristic Epstein-Barr Virus Proteins			<input checked="" type="radio"/>
	WO96/13597	05/09/96	Improved Adenovirus and Methods of Use Thereof			<input checked="" type="radio"/>

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

PB	Anton, M., and F.L. Graham, 1995, Site-specific recombination mediated by an adenovirus vector expressing the Cre recombinase protein: a molecular switch for control of gene expression, J. Virol. 69: 4600-4606.			
	<table border="1"> <tr> <td>EXAMINER</td> <td><i>Peter Brumaker</i></td> <td>DATE CONSIDERED</td> <td>10/20/00</td> </tr> </table>	EXAMINER	<i>Peter Brumaker</i>	DATE CONSIDERED
EXAMINER	<i>Peter Brumaker</i>	DATE CONSIDERED	10/20/00	

PATENT APPLICATION

Page 2 of 5

FORM PTO-1449	ATTY. DOCKET NO.	ADVEC9	SERIAL NO.	09/286,874
	APPLICANT	Graham, et al.		
	FILING DATE	04/06/99	GROUP	Unknown 1632

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

· PB	Araki, K., J. Araki, J. I. Miyazski, and P. Vassali, 1995, Site-specific recombination of a transgene in fertilized eggs by transient expression of Cre recombinase. Proc. Nat'l Acad. Sci. USA 92: 160-164.
↓	Bett, A. J., L. Prevec, and F. L. Graham, 1993, Packaging capacity and stability of human adenovirus type 5 vectors. J. Virol. 67: 5911-5921.
↓	Bett, A. J., W. Haddara, L. Prev, and F.L. Graham, 1994, An efficient and flexible system for construction of adenovirus vectors with insertions or deletions in early region 1 and 3. Proc. Nat'l Acad. Sci. USA 91: 8802-8806.
↓	Di Santo, J. P., W. Mueller, D. Guy-Grand, A. Fischer, and K. Rajewsky, 1995, Lymphoid development in mice with a targeted deletion of the interleukin 2 receptor chain, Proc. Nat'l Sci. USA 92: 377-381.
↓	Gage, P. J., B. Sauer, M. Levin and J. C. Glorioso. 1992. A cell-free recombination system for site-specific integration of multigenic shuttle plasmids into the herpes simplex virus type 1 genome. J. Virol. 66: 5509-5515.
↓	Graham, F. L. and L. Prevec. 1991. Manipulation of adenovirus vectors. In Murray E. J. (ed.), Methods in Molecular Biology. The Human Press Inc. Clifton, N. J. Vol. 7 (Gene Transfer Protocols): 109-128
↓	Graham, F. L. and L. Prevec. 1992. Adenovirus-based expression vectors and recombinant vaccines. in: Vaccines: New Approaches in Immunological Problems., ed. Ellis, R. W. Butterworth-Heinemann Boston, MA: 363-390.
↓	Graham, F. L., J. Smiley, W.C. Russel and R. Naim. 1977. Characteristics of a human cell line transformed by DNA from human adenovirus type 5., J. Gen. Virol. 36: 59-72.
↓	Gu, H., J.D. Marth, P.C. Orban, H. Mossmann and K. Rajewsky. 1994. Deletion of a DNA polymerase B gene segment in T cells using cell type-specific gene targeting. Science 265: 103-106.
· PB	Kilby, N.J., M. R. Snaith, and J. A. H. Murray. 1993. Site-specific recombinases: tools for genome engineering. Trends Genet. 9: 413-421.
EXAMINER	DATE CONSIDERED
Pete Brunault	10/20/00



RECEIVED

JUL 20 1998

TECH CENTER 1600/2900

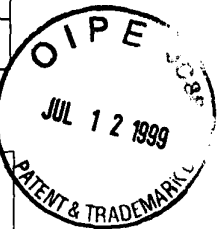
PATENT APPLICATION

Page 3 of 5

FORM PTO-1449	ATTY. DOCKET NO.	ADVEC9	SERIAL NO.	09/286,874
	APPLICANT	Graham, et al.		
	FILING DATE	04/06/99	GROUP	Unknown 1632

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

PB	Metzger, D., J. Clifford, H. Chiba and P. Chambon. 1995. Conditional site-specific recombination in mammalian cells using a ligand-dependent chimeric Cre protein. Proc. Nat'l Acad. Sci. USA 92: 6991-6995.
	Pichel, J. G., Lasko, and H. Westphal. 1993. Timing of SV40 oncogene activation by site-specific recombination determines subsequent tumor progression during murine lens development. Oncogene 8: 3333-3342.
	Sauer, B. 1994. Site-specific recombination: developments and applications. Cur. Opin. Biotech. 5: 521-527.
	Sauer, B., and N. Henderson. 1990. Targeted insertion of exogenous DNA into the eukaryotic genome by the Cre recombinase. The New Biologist 2: 441-449.
	Sauer B., M Whealy, A. Robbins and L. Enquist. 1987. Site-specific insertion of DNA into pseudorabies virus vector. Proc. Nat'l. Acad. Sci. USA 84: 9108-9112.
	Smith, A. J. H., M. A. DeSousa, B. Kwabbi-Addo, A. Heppell-Parton, H. Impey, and P. Rabbits. 1995. A site-directed chromosomal translocation induced in embryonic stem cells by Cre-loxP recombination. Nature Genetics 9: 376-385.
	Sternberg, N., B. Sauer, R. Hoess, and K. Abremski. 1986. Bacteriophage P1 cre gene and its regulatory region; Evidence for multiple promoters and for regulation by DNA methylation., J. Mol. Biol. 187: 197-212.
	Van Deursen, J., M. Fornerod, B. Van Rees, and G. Grosveld. 1995. Cre-mediated site specific translocation between non-homologous mouse chromosomes. Proc. Nat'l. Acad. Sci. USA 92: 7376-7380.
PB	Mittal, S. K., McDermott, M.R., Johnson, D.C., Prevec, L. and F. L. Graham. 1993. Monitoring foreign gene expression by a human adenovirus-based vector using the firefly luciferase gene as a reporter, Virus Research, 28: 67-90.



EXAMINER

Pete Brumby

DATE CONSIDERED

10/20/00

PATENT APPLICATION

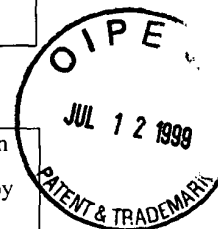
Page 4 of 5

FORM PTO-1449	ATTY. DOCKET NO.	ADVEC9	SERIAL NO.	09/286,874
	APPLICANT	Graham, et al.		
	FILING DATE	04/06/99	GROUP	Unknown 1632

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

PB	Hanke, T., Frank L. Graham, Kenneth L. Rosenthal and David C. Johnson. 1991. Identification of an immunodominant cytotoxic t-lymphocyte recognition site in glycoprotein B of herpes simplex virus by using recombinant adenovirus vectors and synthetic peptides. 1991. J. of Virology, 65: 1177-1186.
	Graham, F. L., 1987. Growth of 293 cells in suspension culture. J. Gen. Virol. 68: 937-940.
	Quantin, B., Leslie D. Pericaudet, Shahragim Tajbakhsh and Jean-Louis Mandel. 1992. Adenovirus as an expression vector in muscle cells in vivo. Proc. Nat'l. Acad. Sci. 89: 2581-2584.
	Rosenfeld, M. A. et al., 1992. In vivo transfer of the human cystic fibrosis transmembrane conductance regulator gene to the airway epithelium, Cell. 68: 143-155.
	W.J. McGrory, D.S. Baulista and F.L. Graham. 1988. A simple technique for the reuse of early region 1 mutations into infectious human adenovirus type 5, Virology 163: 614-617.
	Wang, P., Anton, F. L. Graham and S. Bacchetti. High Frequency recombination between loxP sites in human chromosomes mediated by an adenovirus vector expressing Cre recombinase. Submitted for Publication.
	Sauer, Brian and Nancy Henderson. 1988. Site-specific DNA recombination in mammalian cells by the Cre recombinase of bacteriophage P1. Proc. Nat'l. Acad. Sci. USA 85: 5166-5170.
	Gudrun Schiedner, et al., 1998. Genomic DNA transfer with a high-capacity adenovirus vector results in improved in vivo gene expression and decreased toxicity. Nature Genetics 18: 180-183.
	Manal A. Morsy, et al., 1998. An adenoviral vector deleted for all viral coding sequences results in enhanced safety and extended expression of a leptin transgene. Proc. Nat'l. Acad. Sci. USA 95: 7866-7871.
PB	Stephen Hardy, et al., 1997. Construction of Adenovirus Vectors through Cre-lox Recombination. Jour. Virol. 71: 3 1842-1849.

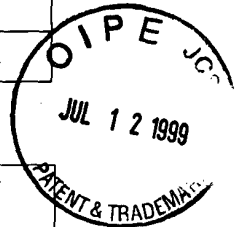
EXAMINER Pete Brunst	DATE CONSIDERED 10/20/00
-------------------------	-----------------------------



PATENT APPLICATION

Page 5 of 5

FORM PTO-1449	ATTY. DOCKET NO.	ADVEC9	SERIAL NO.	09/286,874
	APPLICANT	Graham, et al.		
	FILING DATE	04/06/99	GROUP	Unknown 1632



OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

PB	Parks, et al., 1996. A helper-dependent adenovirus vector system: Removal of helper virus by Cre-mediated excision of the viral packaging signal. Proc. Nat'l. Acad. Sci. USA 93: 13565-13570.
	A. Kass-Eisler, L. Leinwand, J. Gall, B. Bloom and E. Falck-Pedersen. 1996. Circumventing the immune response to adenovirus-mediated gene therapy. Gene Therapy 3: 154-162.
	Roy, S., Shirley, P. S., McClelland, A. and Kaleko, M. 1998. Circumvention of Immunity to the Adenovirus Major Coat Protein Hexon. J. Virology 72: (8) 6875-6879.
PB	Mack, Charles A. et al. 1997. Circumvention of Anti-Adenovirus Neutralizing Immunity by Administration of an Adenoviral Vector of an Alternate Serotype. Hum. Gene Therapy 8: 99-109.
EXAMINER	
Pete Brunner	
DATE CONSIDERED	
10/20/00	